

RECEIVED

NOV 03 2003

41  
Attorney's Docket No.: 16163-005001 / AM100379

1646



TECH CENTER 1600/2900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : William Stuart Somers et al      Art Unit : 1711  
Serial No. : 09/903,876      Examiner : Unknown  
Filed : July 11, 2001  
Title : CRYSTAL STRUCTURE OF ESTROGEN RECEPTOR-BETA COMPLEX AND  
USES THEREOF

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REVOCATION AND NEW POWER OF ATTORNEY

Under 37 CFR §3.73(b) GENETICS INSTITUTE, LLC, certifies that it is the assignee of 100% of the right, title and interest in the patent application identified above by virtue of:

☒ Assignments from the inventors of the patent application identified above, to Genetics Institute, Inc. as shown below. On January 1, 2002, Genetics Institute, Inc. was converted to a limited liability company and changed its name to Genetics Institute, LLC, said change was recorded in the United States Patent and Trademark Office at Reel 012772, Frame 0631 on March 29, 2002. Copies of the assignments are attached.

1. From Chu-Lai Hsiao to Genetics Institute, Inc. recorded in the Patent and Trademark Office at Reel 012448, Frame 0830 on January 10, 2002.
2. From Tatos N. Akopian to Genetics Institute, Inc. recorded in the Patent and Trademark Office at Reel 012450, Frame 0747 on January 10, 2002.
3. From Zhang-Bao Xu to Genetics Institute, Inc. recorded in the Patent and Trademark Office at Reel 012450, Frame 0774 on January 10, 2002.
4. From William S. Somers to Genetics Institute, Inc. recorded in the Patent and Trademark Office at Reel 012448, Frame 0846 on January 10, 2002.
5. From Raymond Unwalla to Genetics Institute, Inc. recorded in the Patent and Trademark Office at Reel 012797, Frame 0443 on January 10, 2002.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

Applicant : William Stuart Somers et al  
Serial No. : 09/903,876  
Filed : July 11, 2001  
Page : 2 of 3

Attorney's Docket No.: 16163-005001 / AM100379

The undersigned, whose title is supplied below, is empowered to act on behalf of the assignee.

The undersigned, acting on behalf of the assignee, hereby revokes all powers of attorney previously granted in the application and appoints:

Elizabeth M. Barnard, Reg. No. 31,088  
Rebecca R. Barrett, Reg. No. 35,152  
Christine P. Bellon, Reg. No. 41,611  
Gavin T. Bogle\*  
Diana M. Collazo, Reg. No. 46,635  
Sean P. Daley, Reg. No. 40,978  
Harold H. Fox, Reg. No. 41,498  
John J. Gagel, Reg. No. 33,499  
John F. Hayden, Reg. No. 37,640  
Elizabeth A. Hurley, Reg. No. 41,859  
David A. Manspeizer, Reg. No. 37,540  
Gale F. Matthews, Reg. No. 32,269

Arnold S. Milowsky, Reg. No. 35,288  
Louis Myers, Reg. No. 35,965  
Robert C. Nabinger, Reg. No. 33,431  
Michael R. Nagy, Reg. No. 33,432  
Tu N. Nguyen, Reg. No. 42,934  
M. Andrea Ryan, Reg. No. 28,469  
Leda I. Trivinos, Reg. No. 50,635  
Albert R. Ubieta, Reg. No. 43,212  
Wendy S. Vincente, Reg. No. 45,496  
Darryl L. Webster, Reg. No. 34,276  
Dorothy P. Whelan, Reg. No. 33,814

\*Limited Recognition Under 37 C.F.R. § 10.9(b)

with full power of substitution and revocation, to prosecute the application and to transact all business in the United States Patent and Trademark Office connected therewith.

All correspondence regarding the application should be sent to:

**PTO Customer Number: 26171**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Applicant : William Stuart Somers et al  
Serial No. : 09/903,876  
Filed : July 11, 2001  
Page : 3 of 3

Attorney's Docket No.: 16163-005001 / AM100379

Respectfully submitted,

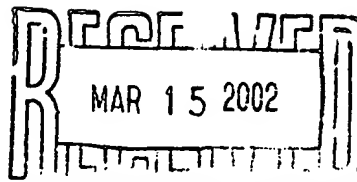
Date: 10/13/07

M. Andrea Ryan  
M. ANDREA RYAN

Title: Assistant Secretary  
On behalf of Genetics Institute, LLC

Fish & Richardson P.C.  
1425 K Street, N.W.  
11th Floor  
Washington, DC 20005-3500  
Telephone: (202) 783-5070  
Facsimile: (202) 783-2331

40172307.doc



RECEIVED

NOV 03 2003

TECH CENTER 1600/2900

MARCH 07, 2002

PTAS

AMSTER, ROTHSTEIN & EBENSTEIN  
CRAIG J. ARNOLD, ESQ.  
90 PARK AVENUE  
NEW YORK, NEW YORK 10016

Chief Information Officer  
Washington, DC 20231  
www.uspto.gov



\*101947248A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2002

REEL/FRAME: 012450/0747

NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

## ASSIGNOR:

AKOPIAN, TATOS N.

DOC DATE: 08/23/2001

## ASSIGNEE:

GENETICS INSTITUTE, INC.  
87 CAMBRIDGE PARK DRIVE  
CAMBRIDGE, MASSACHUSETTS 02140

SERIAL NUMBER: 60217834

PATENT NUMBER:

FILING DATE: 07/12/2000

ISSUE DATE:

SERIAL NUMBER: 09903876

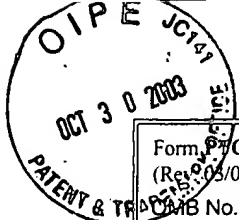
PATENT NUMBER:

FILING DATE: 07/11/2001

ISSUE DATE:

ALLYSON PURNELL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

AMSTER, ROTHSTEIN & EBENSTEIN	
DOCKETED	3/15/02
CLIENT	3719415-9
DUE DATE	
ACTION	
DKT BY:	h9
REVIEWED BY:	h9



RECEIVED

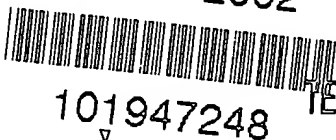
01-15-2002

NOV 03 2003

Form PTO-1595

(Rev. 05/01)

PMB No. 0651-0027 (exp. 5/31/2002)

Tab settings  $\Rightarrow \Rightarrow \Rightarrow \nabla$ 

101947248

TECH CENTER 1600/2900

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Tatos N. Akopian

2. Name and address of receiving party(ies)

Name: Genetics Institute, Inc.

Internal Address: \_\_\_\_\_

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

01-10-02

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_Street Address: 87 Cambridge Park DriveCity: Cambridge State: MA Zip: 02140Execution Date: August 23, 2001Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

60/217,834

09/903,876

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Craig J. Arnold, Esq.Internal Address: Amster, Rothstein & EbensteinStreet Address: 90 Park Avenue

(01/15/2002 AHMED1 00000059 60217834)

(01 F 581

80.00 UP

City: New York State: NY Zip: 100166. Total number of applications and patents involved: 27. Total fee (37 CFR 3.41).....\$ 80.00☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number:

01-1785

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Craig J. Arnold, Reg. No. 34,287

Name of Person Signing

Signature

October 31, 2001

Date

Total number of pages including cover sheet, attachments, and documents: 6Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

**ASSIGNMENT OF INVENTION**

In consideration of the payment by ASSIGNEE to ASSIGNORS of good and valuable consideration, the receipt of which is hereby acknowledged,

**ASSIGNORS:**

(1) Full Name of Inventor: William S. Somers  
Residence: 20 Mead Street, apt. #2, Cambridge, MA 02140  
Citizenship: U.K.

---

(2) Full Name of Inventor: Zhang-Bao Xu  
Residence: 40 Fieldston Circle, Tewksbury, MA 01876  
Citizenship: U.S.A.

---

(3) Full Name of Inventor: Tatos N. Akopian  
Residence: 58 Johnston Street, West Roxbury, MA 02132  
Citizenship: U.S.A.

---

(4) Full Name of Inventor: Chu-Lai Hsiao  
Residence: 55 Sherbourne Point, Waltham, MA 02451  
Citizenship: U.S.A.

---

(5) Full Name of Inventor: Rayomond Unwalla  
Residence: 4025 Killington Court, Eagleville, PA 19403  
Citizenship: India

---

hereby sell, assign, and transfer to ASSIGNEE:

Genetics Institute, Inc.  
87 Cambridge Park Drive  
Cambridge, Massachusetts 02140

and the successors, assigns, and legal representatives of the ASSIGNEE, the entire right, title, and interest for the United States and its territorial possessions, and in all foreign countries, including all rights to claim priority, in and to the invention entitled:

**CRYSTAL STRUCTURE OF ESTROGEN RECEPTOR- $\beta$   
COMPLEX AND USES THEREOF**

that was invented by ASSIGNORS, and which is found in U.S. application Serial No. 60/217,834, filed on July 12, 2000, and in U.S. application Serial No. 09/903,876, filed on July 11, 2001, and any legal equivalent thereof in a foreign country, including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application, or any continuation, division, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof.

ASSIGNORS hereby covenant that no assignment, sale, agreement, or encumbrance has been, or will be, made or entered into which would conflict with this Assignment.

ASSIGNORS authorize ASSIGNEE to make applications for, and to receive, Letters Patent for said invention in any of said countries, in ASSIGNEE's name, or in ASSIGNORS' names, at ASSIGNEE's election.

ASSIGNORS covenant and agree to execute or procure any further necessary assurance of the title to said invention, and any Letters Patent which may issue therefor, and to, at any time, upon the request and at the expense of ASSIGNEE, deliver any testimony in any interference, litigation, or proceeding related thereto, and to execute all papers that may

be necessary or desirable to perfect the title to said invention, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and to, at any time, upon the request and at the expense of ASSIGNEE, execute any continuation, continuation-in-part, divisional, renewal, or substitute thereof, and, as to Letters Patent, and reissue or re-examination thereof, or any other additional applications for Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns, or other legal representatives.

ASSIGNORS authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from any of the aforesaid applications, to said Genetics Institute, Inc. as their ASSIGNEE.

WITNESS our hands and seals this 23 day of Aug, 2001.

\_\_\_\_\_  
William S. Somers



\_\_\_\_\_  
Tatos N. Akopian

\_\_\_\_\_  
Zhang-Bao Xu

\_\_\_\_\_  
Chu-Lai Hsiao

\_\_\_\_\_  
Raymond Unwalla

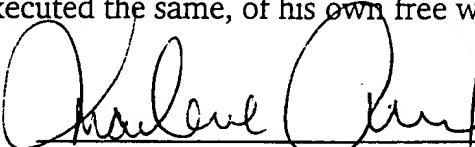


Notary Public

Notary Public

State of Massachusetts }  
County of Middlesex Suffolk }  
SS:

On the 23<sup>rd</sup> day of August, 2001, Tatos N. Akopian personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

  
\_\_\_\_\_  
Notary Public

**MARLENE F. AWAD**  
**NOTARY PUBLIC**  
**MY COMMISSION EXPIRES JAN. 24, 2008**

State of Massachusetts }  
County of Middlesex }  
SS:

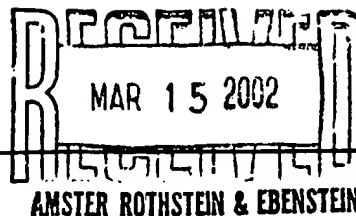
On the \_\_\_\_ day of \_\_\_\_\_, 2001, Chu-Lai Hsiao personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

\_\_\_\_\_  
Notary Public

State of Pennsylvania }  
County of Montgomery }  
SS:

On the \_\_\_\_ day of \_\_\_\_\_, 2001, Raymond Unwalla personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

\_\_\_\_\_  
Notary Public



MARCH 06, 2002

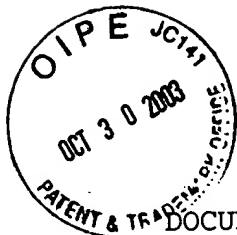
PTAS

Chief Information Officer  
Washington, DC 20231  
www.uspto.gov

AMSTER, ROTHSTEIN & EBENSTEIN  
CRAIG J. ARNOLD  
90 PARK AVENUE  
NEW YORK, NY 10016



\*101946255A\*



UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF NON-RECORDATION OF DOCUMENT

DOCUMENT ID NO.: 101946255

THE ENCLOSED DOCUMENT HAS BEEN EXAMINED AND FOUND NON-RECORDABLE BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. THE REASON(S) FOR NON-RECORDATION ARE STATED BELOW. DOCUMENTS BEING RESUBMITTED FOR RECORDATION MUST BE ACCOMPANIED BY A NEW COVER SHEET REFLECTING THE CORRECT INFORMATION TO BE RECORDED AND THE DOCUMENT ID NUMBER REFERENCED ABOVE.

THE ORIGINAL DATE OF FILING OF THIS ASSIGNMENT DOCUMENT WILL BE MAINTAINED IF RESUBMITTED WITH THE APPROPRIATE CORRECTION(S) WITHIN 30 DAYS FROM THE DATE OF THIS NOTICE AS OUTLINED UNDER 37 CFR 3.51. THE RESUBMITTED DOCUMENT MUST INCLUDE A STAMP WITH THE OFFICIAL DATE OF RECEIPT UNDER 37 CFR 3. APPLICANTS MAY USE THE CERTIFIED PROCEDURES UNDER 37 CFR 1.8 OR 1.10 FOR RESUBMISSION OF THE RETURNED PAPERS, IF THEY DESIRE TO HAVE THE BENEFIT OF THE DATE OF DEPOSIT IN THE UNITED STATES POSTAL SERVICE.

SEND DOCUMENTS TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231. IF YOU HAVE ANY QUESTIONS REGARDING THIS NOTICE, YOU MAY CONTACT THE INDIVIDUAL WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723.

1. EACH CONVEYING PARTY MUST DATE AND SIGN DOCUMENT.
2. THE COVER SHEET SUBMITTED FOR RECORDING IS NOT ACCEPTABLE. THE NAME OF THE CONVEYING PARTY(S) MUST BE INDICATED ON THE COVER SHEET AND MUST BE COMPLETE. (I.E. LAST NAME, FIRST NAME MI)

SAUNDRA BALLENGER, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

AMSTER, ROTHSTEIN & EBENSTEIN	
DOCKETED	3/15/02
CLIENT	37174/3 & 9
DUE DATE	4/5/02
ACTION	NON-RECORDATION
DKT BY:	REVIEWED BY:



AMSTER, ROTHSTEIN & EBENSTEIN

702 APR -1 AM 9:25  
OFFICE RECORDS  
ATTORNEYS AT LAW

PATENTS • TRADEMARKS • COPYRIGHTS

FINANCE SECTION 90 PARK AVENUE

NEW YORK, NEW YORK 10016

TELEPHONE: (212) 697-5995

FACSIMILE: (212) 286-0854

NEAL L. ROSENBERG  
DENISE A. LINDENAUER  
NANCY M. DODDERIDGE  
PATRICK BOLAND\*  
TREBOR LLOYD  
JOSEPH M. CASINO  
JOHN S. ECONOMOU  
MICHAEL V. SOLOMITA  
HOLLY PEKOWSKY  
MICHAEL P. KENNEY  
MARION P. METELSKI\*  
MONIQUE L. RIBANDO

SCOTT MCCLAVE  
LISA MELANSON  
MAX VERN  
DANA R. METES  
KARL J. KOLBINGER  
BRIAN A. COMACK  
RICHARD S. MANDARO  
NATALIE BOGDANOS  
MARC J. JASON  
ELIE H. GENDLOFF, PH.D\*  
\*NOT ADMITTED IN NEW YORK

JURON AMSTER  
JESSE ROTHSTEIN (RETIRED)  
DANIEL S. EBENSTEIN  
PHILIP H. GOTTFRIED  
MICHAEL J. BERGER  
NEIL M. ZIPKIN  
ANTHONY F. LO CICERO  
KENNETH P. GEORGE  
ABRAHAM KASDAN, PH.D.  
IRA E. SILFIN  
CHESTER ROTHSTEIN  
CRAIG J. ARNOLD

SENIOR COUNSEL

CHARLES R. MACEDO  
MARK J. ROSENBERG  
KENNETH M. BERNSTEIN

OF COUNSEL

JERRY DAINOW

April 4, 2002

via Express Mail

Ms. Saundra Ballenger, Examiner  
U.S. Patent and Trademark Office  
Assignment Division  
Box Assignments, CG-4  
1213 Jefferson Davis Hwy, Suite 320  
Washington, D.C. 20231

"Express Mail" mailing label no. FT332291183US

Date of Deposit: April 4, 2002

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Ms. Saundra Ballenger, Examiner, U.S. Patent and Trademark Office, Assignment Division, 1213 Jefferson Davis Hwy, Suite 320, Washington, D.C. 20231.

Name: Craig J. Arnold

Signature: 

Re: U.S. Patent Application No. 09/903,826 and  
U.S. Provisional Application No. 60/217,834  
Title: CRYSTAL STRUCTURE OF ESTROGEN RECEPTOR- $\beta$   
COMPLEX AND USES THEREOF  
Inventors: William S. Somers, Zhang-Bao Xu, Tatos N. Akopian,  
Chu-Lai Hsiao and Rayomand Unwalla  
Our File: 37174/3 and 9

Dear Ms. Ballenger:

We received a Notice from the U.S. Patent Office dated March 6, 2002 advising us that an Assignment previously submitted for recordation was found to be non-recordable by the Assignment Division. The original Notice together with the original Assignment submitted for recordation including the Assignment Recordation Cover Sheet is enclosed herewith.

We understand the Assignment was found to be non-recordable because of the incorrect belief that the annotations by Rayomand Unwalla on page 3 of the Assignment reflected his middle name. However, his initials reflect the correction of his first name, and do not correspond to his middle name. The decision that the Assignment was non-recordable was incorrect. For these reasons, applicants respectfully request recordation of the enclosed Assignment.

Ms. Sandra Ballenger

-2-

April 4, 2002

Since the Assignment is being submitted within thirty (30) days of the March 6, 2002 Notice, this resubmission does not require additional fee. If any additional fee is required, however, authorization is given to charge any such fee to Deposit Account No. 01-1785.

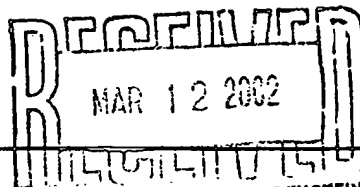
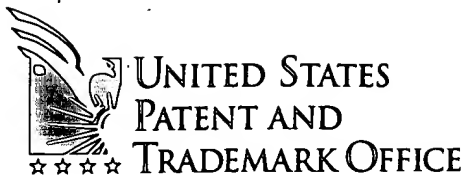
Very truly yours,

AMSTER ROTHSTEIN & EBENSTEIN

A handwritten signature in black ink, appearing to read "Craig J. Arnold". The signature is fluid and cursive, with the first name "Craig" being more prominent.

Craig J. Arnold

CJA/jgf  
Encl.



MARCH 07, 2002

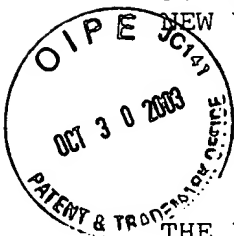
PTAS/AMSTER ROTHSTEIN & EBENSTEIN

Chief Information Officer  
Washington, DC 20231  
www.uspto.gov

AMSTER, ROTHSTEIN & EBENSTEIN  
CRAIG J. ARNOLD, ESQ.  
90 PARK AVENUE  
NEW YORK, NY 10016



\*101947249A\*



UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2002

REEL/FRAME: 012450/0774

NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

XU, ZHANG-BAO

DOC DATE: 08/27/2001

ASSIGNEE:

GENETICS INSTITUTE, INC.  
87 CAMBRIDGE PARK DRIVE  
CAMBRIDGE, MASSACHUSETTS 02140

SERIAL NUMBER: 60217834

PATENT NUMBER:

FILING DATE: 07/12/2000

ISSUE DATE:

SERIAL NUMBER: 09903876

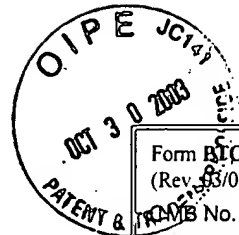
PATENT NUMBER:

FILING DATE: 07/11/2001

ISSUE DATE:

MARY BENTON, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

AMSTER, ROTHSTEIN & EBENSTEIN	
DOCKETED	5/13/02
CLIENT	3717419 & S
DUE DATE	
ACTION	
DKT BY:	REVIEWED BY: [Signature]



01-15-2002

Form BTO-1595

(Rev. 3/01)

RE

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

OMB No. 0651-0027 (exp. 5/31/2002)

101947249

Tab settings ⇨ ⇨ ⇨ ▾ ▾ ▾ ▾

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Zhang-Bao Xu

## 2. Name and address of receiving party(ies)

Name: Genetics Institute, Inc.

Internal Address: \_\_\_\_\_

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Street Address: 87 Cambridge Park DriveCity: Cambridge State: MA Zip: 02140Execution Date: August 27, 2001Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

60/217,834

09/903,876

B. Patent No.(s)

JAN 10 2002

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Craig J. Arnold, Esq.Internal Address: Amster, Rothstein & Ebenstein6. Total number of applications and patents involved: 27. Total fee (37 CFR 3.41).....\$ 80.00

- ☒ Enclosed  
☐ Authorized to be charged to deposit account

## 8. Deposit account number:

01-1785

(Attach duplicate copy of this page if paying by deposit account)

01/15/2002 AAHMED1 00000061 60217834

01 FEB 581 80.00 DP

Street Address: 90 Park AvenueCity: New York State: NY Zip: 10016

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Craig J. Arnold, Reg. No. 34,287

Name of Person Signing

Signature

October 31, 2001

Date

Total number of pages including cover sheet, attachments, and documents: 6

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

**ASSIGNMENT OF INVENTION**

In consideration of the payment by ASSIGNEE to ASSIGNORS of good and valuable consideration, the receipt of which is hereby acknowledged,

**ASSIGNORS:**

(1) Full Name of Inventor: William S. Somers  
Residence: 20 Mead Street, apt. #2, Cambridge, MA 02140  
Citizenship: U.K.

---

(2) Full Name of Inventor: Zhang-Bao Xu  
Residence: 40 Fieldston Circle, Tewksbury, MA 01876  
Citizenship: U.S.A.

---

(3) Full Name of Inventor: Tatos N. Akopian  
Residence: 58 Johnston Street, West Roxbury, MA 02132  
Citizenship: U.S.A.

---

(4) Full Name of Inventor: Chu-Lai Hsiao  
Residence: 55 Sherbourne Point, Waltham, MA 02451  
Citizenship: U.S.A.

---

(5) Full Name of Inventor: Rayomond Unwalla  
Residence: 4025 Killington Court, Eagleville, PA 19403  
Citizenship: India

---

hereby sell, assign, and transfer to ASSIGNEE:

Genetics Institute, Inc.  
87 Cambridge Park Drive  
Cambridge, Massachusetts 02140



and the successors, assigns, and legal representatives of the ASSIGNEE, the entire right, title, and interest for the United States and its territorial possessions, and in all foreign countries, including all rights to claim priority, in and to the invention entitled:

**CRYSTAL STRUCTURE OF ESTROGEN RECEPTOR- $\beta$   
COMPLEX AND USES THEREOF**

that was invented by ASSIGNORS, and which is found in U.S. application Serial No. 60/217,834, filed on July 12, 2000, and in U.S. application Serial No. 09/903,876, filed on July 11, 2001, and any legal equivalent thereof in a foreign country, including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application, or any continuation, division, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof.

ASSIGNORS hereby covenant that no assignment, sale, agreement, or encumbrance has been, or will be, made or entered into which would conflict with this Assignment.

ASSIGNORS authorize ASSIGNEE to make applications for, and to receive, Letters Patent for said invention in any of said countries, in ASSIGNEE's name, or in ASSIGNORS' names, at ASSIGNEE's election.

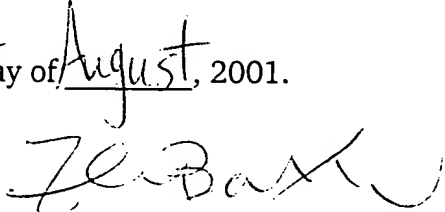
ASSIGNORS covenant and agree to execute or procure any further necessary assurance of the title to said invention, and any Letters Patent which may issue therefor, and to, at any time, upon the request and at the expense of ASSIGNEE, deliver any testimony in any interference, litigation, or proceeding related thereto, and to execute all papers that may

be necessary or desirable to perfect the title to said invention, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and to, at any time, upon the request and at the expense of ASSIGNEE, execute any continuation, continuation-in-part, divisional, renewal, or substitute thereof, and, as to Letters Patent, and reissue or re-examination thereof, or any other additional applications for Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns, or other legal representatives.

ASSIGNORS authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from any of the aforesaid applications, to said Genetics Institute, Inc. as their ASSIGNEE.

WITNESS our hands and seals this 27<sup>th</sup> day of August, 2001.

\_\_\_\_\_  
William S. Somers

  
\_\_\_\_\_  
Zhang-Bao Xu

\_\_\_\_\_  
Tatos N. Akopian

\_\_\_\_\_  
Chu-Lai Hsiao

\_\_\_\_\_  
Raymond Unwalla

## ACKNOWLEDGMENT

Notary Public

On the 27<sup>th</sup> day of August, 2001, Zhang-Bao Xu personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

Notary Public EXP 4/25/08

State of Massachusetts }  
County of Middlesex } ss:

State of Massachusetts }  
County of Middlesex } ss:  
}

On the \_\_\_\_ day of \_\_\_\_\_, 2001, Tatos N. Akopian personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

Notary Public

State of Massachusetts }  
County of Middlesex } ss:  
}

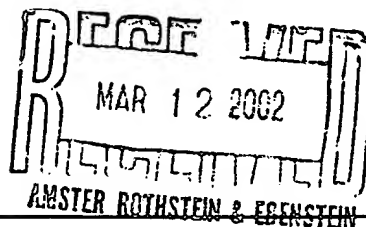
On the \_\_\_\_ day of \_\_\_\_\_, 2001, Chu-Lai Hsiao personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

Notary Public

State of Pennsylvania }  
County of Montgomery } ss:

On the \_\_\_\_ day of \_\_\_\_\_, 2001, Raymond Unwalla personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

Notary Public



RECEIVED

NOV 03 2003

TECH CENTER 1600/2900

MARCH 06, 2002

PTAS

Chief Information Officer  
Washington, DC 20231  
www.uspto.govAMSTER, ROTHSTEIN & EBENSTEIN  
CRAIG J. ARNOLD, ESQ.  
90 PARK AVENUE  
NEW YORK, NY 10016

\*101946256A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2002

REEL/FRAME: 012448/0830

NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

## ASSIGNOR:

HSIAO, CHU-LAI

DOC DATE: 08/27/2001

## ASSIGNEE:

GENETICS INSTITUTE, INC.  
87 CAMBRIDGE PARK DRIVE  
CAMBRIDGE, MASSACHUSETTS 02140

SERIAL NUMBER: 60217834

PATENT NUMBER:

FILING DATE: 07/12/2000

ISSUE DATE:

SERIAL NUMBER: 09903876

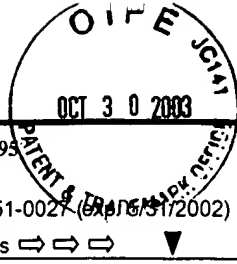
PATENT NUMBER:

FILING DATE: 07/11/2001

ISSUE DATE:

MARCUS KIRK, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

AMSTER, ROTHSTEIN & EBENSTEIN	
DOCKETED	3/13/02
CLIENT	371741983
DUE DATE	
ACTION	
DKT BY: 1-	REVIEWED BY: dg



RECEIVED

01-15-2002



NOV 03 2005 U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

Form PTO-1593 (Rev. 03/01) RI  
OMB No. 0651-0027 (Expires 5/31/2002)  
Tab settings → → → ▼

101946256 TECH CENTER 1600/2907 ▼

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

**Chu-Lai Hsiao**

11/10/02

2. Name and address of receiving party(ies)

Name: **Genetics Institute, Inc.**

Internal Address: \_\_\_\_\_

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:



Assignment



Merger



Security Agreement



Change of Name



Other \_\_\_\_\_

Street Address: **87 Cambridge Park Drive**

City: **Cambridge** State: **MA** Zip: **02140**

Execution Date: **August 27, 2001**

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

**60/217,834**

**09/903,876**

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **Craig J. Arnold, Esq.**

Internal Address: **Amster, Rothstein & Ebenstein**

6. Total number of applications and patents involved: **2**

7. Total fee (37 CFR 3.41).....\$ **80.00**

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number:

**01-1785**

(Attach duplicate copy of this page if paying by deposit account)

01/15/2002 AAHMD1 00000057 60217834

01 FC 581 40.00 DP

Street Address: **90 Park Avenue**

01/15/2002 AAHMD1 00000058 60217834

01 FC 581 40.00 DP

City: **New York** State: **NY** Zip: **10016**

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

**Craig J. Arnold, Reg. No. 34,287**

Name of Person Signing

*Craig J. Arnold*  
Signature

**October 31, 2001**

Date

Total number of pages including cover sheet, attachments, and documents: **6**

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

ASSIGNMENT OF INVENTION

In consideration of the payment by ASSIGNEE to ASSIGNORS of good and valuable consideration, the receipt of which is hereby acknowledged,

ASSIGNORS:

(1) Full Name of Inventor: William S. Somers  
Residence: 20 Mead Street, apt. #2, Cambridge, MA 02140  
Citizenship: U.K.

---

(2) Full Name of Inventor: Zhang-Bao Xu  
Residence: 40 Fieldston Circle, Tewksbury, MA 01876  
Citizenship: U.S.A.

---

(3) Full Name of Inventor: Tatos N. Akopian  
Residence: 58 Johnston Street, West Roxbury, MA 02132  
Citizenship: U.S.A.

---

(4) Full Name of Inventor: Chu-Lai Hsiao  
Residence: 55 Sherbourne Point, Waltham, MA 02451  
Citizenship: U.S.A.

---

(5) Full Name of Inventor: Rayomond Unwalla  
Residence: 4025 Killington Court, Eagleville, PA 19403  
Citizenship: India

---

hereby sell, assign, and transfer to ASSIGNEE:

Genetics Institute, Inc.  
87 Cambridge Park Drive  
Cambridge, Massachusetts 02140

and the successors, assigns, and legal representatives of the ASSIGNEE, the entire right, title, and interest for the United States and its territorial possessions, and in all foreign countries, including all rights to claim priority, in and to the invention entitled:

**CRYSTAL STRUCTURE OF ESTROGEN RECEPTOR- $\beta$   
COMPLEX AND USES THEREOF**

that was invented by ASSIGNORS, and which is found in U.S. application Serial No. 60/217,834, filed on July 12, 2000, and in U.S. application Serial No. 09/903,876, filed on July 11, 2001, and any legal equivalent thereof in a foreign country, including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application, or any continuation, division, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof.

ASSIGNORS hereby covenant that no assignment, sale, agreement, or encumbrance has been, or will be, made or entered into which would conflict with this Assignment.

ASSIGNORS authorize ASSIGNEE to make applications for, and to receive, Letters Patent for said invention in any of said countries, in ASSIGNEE's name, or in ASSIGNORS' names, at ASSIGNEE's election.

ASSIGNORS covenant and agree to execute or procure any further necessary assurance of the title to said invention, and any Letters Patent which may issue therefor, and to, at any time, upon the request and at the expense of ASSIGNEE, deliver any testimony in any interference, litigation, or proceeding related thereto, and to execute all papers that may



be necessary or desirable to perfect the title to said invention, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and to, at any time, upon the request and at the expense of ASSIGNEE, execute any continuation, continuation-in-part, divisional, renewal, or substitute thereof, and, as to Letters Patent, and reissue or re-examination thereof, or any other additional applications for Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns, or other legal representatives.

ASSIGNORS authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from any of the aforesaid applications, to said Genetics Institute, Inc. as their ASSIGNEE.

WITNESS our hands and seals this 27<sup>th</sup> day of August, 2001.

\_\_\_\_\_  
William S. Somers

\_\_\_\_\_  
Zhang-Bao Xu

\_\_\_\_\_  
Tatos N. Akopian

*Chu-Lai Hsiao*

\_\_\_\_\_  
Chu-Lai Hsiao

\_\_\_\_\_  
Raymond Unwalla

Notary Public

Notary Public

State of Massachusetts }  
County of Middlesex } ss:  
}

Notary Public

State of Massachusetts }  
County of Middlesex } ss:  
}

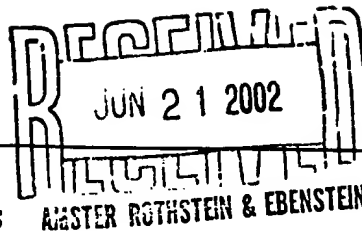
Notary Public CAP 4/25-05

State of Pennsylvania }  
County of Montgomery } SS:

Notary Public



UNITED STATES  
PATENT AND  
TRADEMARK OFFICE



JUNE 14, 2002

PTAS

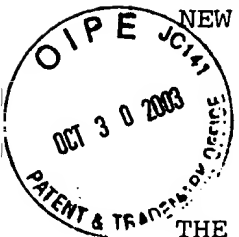
AMSTER ROTHSTEIN & EBENSTEIN

Chief Information Officer  
Washington, DC 20231  
www.uspto.gov

AMSTER, ROHTSTEIN & EBENSTEIN  
CRAIG J. ARNOLD, ESQ.  
90 PARK AVENUE  
NEW YORK, NY 10016



\*102061810A\*



UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2002

REEL/FRAME: 012797/0443  
NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

UNWALLA, RAYOMOND

DOC DATE: 08/20/2001

ASSIGNEE:

GENETICS INSTITUTE, INC.  
87 CAMBRIDGE PARK DRIVE  
CAMBRIDGE, MASSACHUSETTS 02140

SERIAL NUMBER: 60217834  
PATENT NUMBER:

FILING DATE: 07/12/2000  
ISSUE DATE:

SERIAL NUMBER: 09903876  
PATENT NUMBER:

FILING DATE: 07/11/2001  
ISSUE DATE:

ANTIONE ROYALL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

AMSTER, ROTHSTEIN & EBENSTEIN	
DOCKETED	6/24/02
CLIENT	37/74/9
DUE DATE	
ACTION	
DKT BY:	REVIEWED BY:

RE



04-19-2002

RECEIVED

NOV 03 2003

Form PTO-1595  
(Rev. 03/01)

OMB No. 0651-0027 (exp. 5/31/2002)

Tab settings ⇨ ⇨ ⇨



102061810

TECH CENTER 1600/2900

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
**Rayomond Unwalla**

1/10/02

2. Name and address of receiving party(ies)  
Name: **Genetics Institute, Inc.**  
Internal Address: \_\_\_\_\_

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:  
☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Street Address: **87 Cambridge Park Drive**

City: **Cambridge** State: **MA** Zip: **02140**

Execution Date: **August 20, 2001**

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):  
If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)  
**60/217,834**  
**09/903,876**

B. Patent No.(s)

10

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **Craig J. Arnold, Esq.**

Internal Address: **Amster, Rothstein & Ebenstein**

Street Address: **90 Park Avenue**

01/15/2002 AAHMD1 00000056 60217834

01 FO:581 80.00 OP

City: **New York** State: **NY** Zip: **10016**

6. Total number of applications and patents involved: **2**

7. Total fee (37 CFR 3.41).....\$ **80.00**

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number:

**01-1785**

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

**Craig J. Arnold, Reg. No. 34,287**  
Name of Person Signing

*Craig J. Arnold*  
Signature

**October 31, 2001**  
Date

Total number of pages including cover sheet, attachments, and documents: **6**

**ASSIGNMENT OF INVENTION**

In consideration of the payment by ASSIGNEE to ASSIGNORS of good and valuable consideration, the receipt of which is hereby acknowledged,

**ASSIGNORS:**

(1) Full Name of Inventor: William S. Somers  
Residence: 20 Mead Street, apt. #2, Cambridge, MA 02140  
Citizenship: U.K.

---

(2) Full Name of Inventor: Zhang-Bao Xu  
Residence: 40 Fieldston Circle, Tewksbury, MA 01876  
Citizenship: U.S.A.

---

(3) Full Name of Inventor: Tatos N. Akopian  
Residence: 58 Johnston Street, West Roxbury, MA 02132  
Citizenship: U.S.A.

---

(4) Full Name of Inventor: Chu-Lai Hsiao  
Residence: 55 Sherbourne Point, Waltham, MA 02451  
Citizenship: U.S.A.

---

(5) Full Name of Inventor: Rayomond Unwalla  
Residence: 4025 Killington Court, Eagleville, PA 19403  
Citizenship: India

---

hereby sell, assign, and transfer to ASSIGNEE:

Genetics Institute, Inc.  
87 Cambridge Park Drive  
Cambridge, Massachusetts 02140

and the successors, assigns, and legal representatives of the ASSIGNEE, the entire right, title, and interest for the United States and its territorial possessions, and in all foreign countries, including all rights to claim priority, in and to the invention entitled:

**CRYSTAL STRUCTURE OF ESTROGEN RECEPTOR- $\beta$   
COMPLEX AND USES THEREOF**

that was invented by ASSIGNORS, and which is found in U.S. application Serial No. 60/217,834, filed on July 12, 2000, and in U.S. application Serial No. 09/903,876, filed on July 11, 2001, and any legal equivalent thereof in a foreign country, including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application, or any continuation, division, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof.

ASSIGNORS hereby covenant that no assignment, sale, agreement, or encumbrance has been, or will be, made or entered into which would conflict with this Assignment.

ASSIGNORS authorize ASSIGNEE to make applications for, and to receive, Letters Patent for said invention in any of said countries, in ASSIGNEE's name, or in ASSIGNORS' names, at ASSIGNEE's election.

ASSIGNORS covenant and agree to execute or procure any further necessary assurance of the title to said invention, and any Letters Patent which may issue therefor, and to, at any time, upon the request and at the expense of ASSIGNEE, deliver any testimony in any interference, litigation, or proceeding related thereto, and to execute all papers that may

be necessary or desirable to perfect the title to said invention, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and to, at any time, upon the request and at the expense of ASSIGNEE, execute any continuation, continuation-in-part, divisional, renewal, or substitute thereof, and, as to Letters Patent, and reissue or re-examination thereof, or any other additional applications for Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns, or other legal representatives.

ASSIGNORS authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from any of the aforesaid applications, to said Genetics Institute, Inc. as their ASSIGNEE.

WITNESS our hands and seals this 20 day of Aug., 2001.

\_\_\_\_\_  
William S. Somers

\_\_\_\_\_  
Zhang-Bao Xu

\_\_\_\_\_  
Tatos N. Akopian

\_\_\_\_\_  
Chu-Lai Hsiao

\_\_\_\_\_  
*Raymond Unwalla*

Raymond Unwalla

Raymond Ryn

8/20/01





State of Massachusetts }  
County of Middlesex } ss:

Notary Public

Notary Public

On the 20<sup>th</sup> day of AUGUST, 2001, <sup>RAYMOND</sup>~~Raymond~~ Unwalla personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

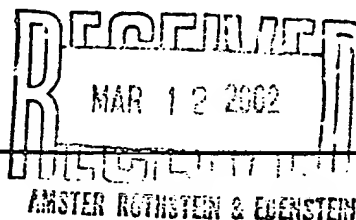
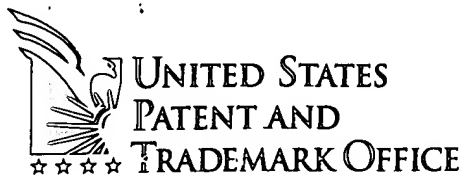
Notary Public



RECEIVED

NOV 03 2003

TECH CENTER 1600/2900



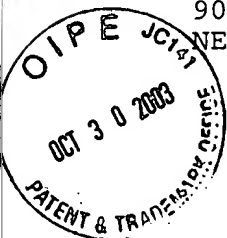
MARCH 06, 2002

PTAS

AMSTER ROTHSTEIN &amp; EBENSTEIN

Chief Information Officer  
Washington, DC 20231  
www.uspto.govAMSTAR, ROTHSTEIN & EBENSTEIN  
CRAIG J. ARNOLD, ESQ.  
90 PARK AVENUE  
NEW YORK, NY 10016

\*101946257A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2002

REEL/FRAME: 012448/0846

NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

## ASSIGNOR:

SOMERS, WILLIAM S.

DOC DATE: 08/24/2001

## ASSIGNEE:

GENETICS INSTITUTE, INC.  
87 CAMBRIDGE PARK DRIVE  
CAMBRIDGE, MASSACHUSETTS 02140

SERIAL NUMBER: 60217834

PATENT NUMBER:

FILING DATE: 07/12/2000

ISSUE DATE:

SERIAL NUMBER: 09903876

PATENT NUMBER:

FILING DATE: 07/11/2001

ISSUE DATE:

PAULA MCCRAY, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

AMSTER, ROTHSTEIN & EBENSTEIN	
DOCKETED	3/13/02
CLIENT	371741943
DUE DATE	
ACTION	
DKT BY:	REVIEWED BY:



01-15-2002

RECEIVED

Form PTO-1595

(Rev. 03/01)

OMB No. 0651-0027 (exp. 5/31/2002)

Tab settings ⇌ ⇌ ⇌ ▾



101946257

TECH CENTER 1600/2500 ▾

NOV 03 2001  
U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

William S. Somers

11/10/02

2. Name and address of receiving party(ies)

Name: Genetics Institute, Inc.

Internal Address: \_\_\_\_\_

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:



Assignment



Merger



Security Agreement



Change of Name



Other \_\_\_\_\_

Street Address: 87 Cambridge Park DriveCity: Cambridge State: MA Zip: 02140Execution Date: August 24, 2001Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

60/217,834

09/903,876

B. Patent No.(s)

10

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Craig J. Arnold, Esq.Internal Address: Amster, Rothstein & EbensteinStreet Address: 90 Park Avenue

01/15/2002 AAHMED1 00000060 60217834

01 FC 581

80.00 DP

City: New York State: NY Zip: 100166. Total number of applications and patents involved: 27. Total fee (37 CFR 3.41).....\$ 80.00☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number:

01-1785

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Craig J. Arnold, Reg. No. 34,287

Name of Person Signing

Signature

October 31, 2001

Date

Total number of pages including cover sheet, attachments, and documents: 6Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

**ASSIGNMENT OF INVENTION**

In consideration of the payment by ASSIGNEE to ASSIGNORS of good and valuable consideration, the receipt of which is hereby acknowledged,

**ASSIGNORS:**

(1) Full Name of Inventor: William S. Somers  
Residence: 20 Mead Street, apt. #2, Cambridge, MA 02140  
Citizenship: U.K.

---

(2) Full Name of Inventor: Zhang-Bao Xu  
Residence: 40 Fieldston Circle, Tewksbury, MA 01876  
Citizenship: U.S.A.

---

(3) Full Name of Inventor: Tatos N. Akopian  
Residence: 58 Johnston Street, West Roxbury, MA 02132  
Citizenship: U.S.A.

---

(4) Full Name of Inventor: Chu-Lai Hsiao  
Residence: 55 Sherbourne Point, Waltham, MA 02451  
Citizenship: U.S.A.

---

(5) Full Name of Inventor: Rayomond Unwalla  
Residence: 4025 Killington Court, Eagleville, PA 19403  
Citizenship: India

---

hereby sell, assign, and transfer to ASSIGNEE:

Genetics Institute, Inc.  
87 Cambridge Park Drive  
Cambridge, Massachusetts 02140

and the successors, assigns, and legal representatives of the ASSIGNEE, the entire right, title, and interest for the United States and its territorial possessions, and in all foreign countries, including all rights to claim priority, in and to the invention entitled:

**CRYSTAL STRUCTURE OF ESTROGEN RECEPTOR- $\beta$   
COMPLEX AND USES THEREOF**

that was invented by ASSIGNORS, and which is found in U.S. application Serial No. 60/217,834, filed on July 12, 2000, and in U.S. application Serial No. 09/903,876, filed on July 11, 2001, and any legal equivalent thereof in a foreign country, including the right to claim priority, including any and all improvements disclosed therein, and in and to all Letters Patent to be obtained for said invention by the above application, or any continuation, division, renewal, or substitute thereof, and, as to Letters Patent, any reissue or re-examination thereof.

ASSIGNORS hereby covenant that no assignment, sale, agreement, or encumbrance has been, or will be, made or entered into which would conflict with this Assignment.

ASSIGNORS authorize ASSIGNEE to make applications for, and to receive, Letters Patent for said invention in any of said countries, in ASSIGNEE's name, or in ASSIGNORS' names, at ASSIGNEE's election.

ASSIGNORS covenant and agree to execute or procure any further necessary assurance of the title to said invention, and any Letters Patent which may issue therefor, and to, at any time, upon the request and at the expense of ASSIGNEE, deliver any testimony in any interference, litigation, or proceeding related thereto, and to execute all papers that may

be necessary or desirable to perfect the title to said invention, or any Letters Patent which may be granted therefor in ASSIGNEE, its successors, assigns, or other legal representatives, and to, at any time, upon the request and at the expense of ASSIGNEE, execute any continuation, continuation-in-part, divisional, renewal, or substitute thereof, and, as to Letters Patent, and reissue or re-examination thereof, or any other additional applications for Letters Patent for said invention or any part thereof, all of which applications and any Letters Patent issuing thereon are hereby assigned to ASSIGNEE, will make all rightful oaths or declarations, and do all lawful acts requisite for procuring the same therein, without further compensation, but at the expense of ASSIGNEE, its successors, assigns, or other legal representatives.

ASSIGNORS authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States for said invention, resulting from any of the aforesaid applications, to said Genetics Institute, Inc. as their ASSIGNEE.

WITNESS our hands and seals this 24<sup>th</sup> day of Aug, 2001.



William S. Somers

Zhang-Bao Xu

Tatos N. Akopian

Chu-Lai Hsiao

Raymond Unwalla

Docket No: 37174/3  
Patent 60/217,834  
Docket No: 37174/9  
Patent 09/903,876

## ACKNOWLEDGMENT

State of Massachusetts }  
County of Middlesex } ss:  
}

On the 24<sup>th</sup> day of August, 2001, William S. Somers personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

Notary Public t x p 4/25/08

State of Massachusetts }  
County of Middlesex } ss:  
}

On the \_\_\_\_ day of \_\_\_\_\_, 2001, Zhang-Bao Xu personally appeared before me, known by me to be the same person described in, and who executed, the foregoing instrument, and acknowledged that he executed the same, of his own free will and for the purposes set forth.

Notary Public



State of Massachusetts }  
County of Middlesex } ss:

State of Massachusetts }  
County of Middlesex } ss:

State of Pennsylvania }  
County of Montgomery } ss: